

REMARKS

Claims 52 through 56 were presented for examination. Claim 56 has been withdrawn pursuant to the Examiner's restriction requirement. Since the priority application has now matured into a U.S. patent, the Examiner has requested that the patent number be included in the first sentence of the application on page 1. The foregoing amendment of the specification fulfills that request.

The Examiner has rejected claims 52 through 55 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-8 of U.S. Patent No. 6,706,931 which is the parent of this application. The Applicants hereby submit the enclosed Terminal Disclaimer, signed by attorney of record Yukiko Iwata, with reference to U.S. 6,706,931 in order to overcome this rejection.

Claims 52-55 have been rejected under Section 112, first paragraph, because the specification does not reasonably provide the enablement for any olefin material. The Applicants have amended claim 52 to include that the olefin must have the formula that is described on page 18 of the specification. Since the Examiner has already stated on page 4 of the office action that the specification is enabling for these compounds, the Applicants assert that this amendment overcomes the Section 112 rejection.

Claim 53 has been rejected under Section 112, first paragraph, because the specification does not reasonably provide enablement for any catalyst. In response to this rejection, the Applicants have amended claim 53 to state that the acid catalyst is selected from the group consisting of Bronsted acids, Lewis acids, Friedel-Crafts catalysts, zeolites, and ion exchange resins. The basis for this amendment is found at the top of page 13 of the specification wherein these acids are described. The Applicants assert that the Section 112 rejection is overcome since the amendment limits the scope of the acid catalysts and the text following the top of page 13 provides examples of many different acid catalysts falling within those groups.

Claims 52 through 55 have also been rejected under Section 112, second paragraph, as being indefinite. The Examiner objects to the use of the term "an olefin having an average carbon number" because it is unclear as to how an olefin can have an average carbon number. The Applicants have amended claims 52 and 54 to state that the starting material for the process is an "olefin composition." A description of the olefins which can be useful in the present invention is quite detailed and lengthy as it extends from page 9 of the specification to page 12. It is clear from this description that the olefin can be a single olefin which the Applicants assert would then have an average carbon number of however many carbons that olefin has or the olefin can be an olefin composition which contains a mixture of olefins. Preferred examples include the feedstocks from commercial processes described on page 11 of the specification, including a mixture produced by the Fischer-Tropsch process. The Applicants assert that the insertion of the term "composition" into

claims 52 and 54 makes those claims more clear in that the composition may be a single olefin or it may be a mixture of olefins but in any case the olefin will have an average carbon number of 3 to 18. Thus, the Applicants assert that this Section 112 rejection is overcome by the foregoing argument.

Claims 52 and 53 have been rejected under Section 102(b) as being anticipated by CA:102:220779. Claims 52-54 have been rejected under Section 102(b) as being anticipated by CA:120:107377. Claims 52 and 55 have been rejected under Section 103(a) as being unpatentable over CA:102:220779. These rejections are respectfully traversed.

Claim 52 has been amended to describe the olefins included within the formula for olefins that appears at the bottom of page 18 of the specification. This formula does not encompass any of the structures shown in CA:102:220779. Therefore, the Applicants assert that claims 52 and 53 are not anticipated by this reference.

As discussed above, the olefins used in the process of claims 52-54 are those defined by the structure that appears at the bottom of claim 18. No compound of any structure which fits the description of the structure at the bottom of claim 18 is found in the reference CA:120:107377. Claim 52 does not include an olefin which has three double bonds. Thus, claims 52-54 are not anticipated by CA:120:107377.

CA:102:220779 describes a process for reacting two butenal with excess ethylene glycol in the presence of a 4-MeC₆H₄SO₃H catalyst to produce 2-[2-(2-hydroxyethoxy)propyl]-1,3-dioxolane. Thus, this reference does not describe a process for making branched alcohols by reacting olefins with 1,3-propane diol. The intermediate reaction shown, which reacts 1,3-propane diol with CH₃-CH=CH-CH=O, does not show a reaction which makes a branched alcohol as described in the present specification. It appears as if the product is a dioxolane which has both ether and hydroxyl functionality. The Applicants assert that this reference is far afield from the subject matter of the present invention and that it does not disclose or suggest the claimed reaction of olefins that fall within the description at the bottom of page 18 of the specification with 1,3-propane diol to produce the desired branched alcohols.

For the reasons discussed above, the Applicants assert that the rejections have all been overcome. An early notice of allowance is respectfully requested.

Respectfully submitted,

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